

~~Art~~

1. (Amended) An optical scanning apparatus comprising entrance optical means for guiding light emitted from light source means, to deflecting means, and scanning optical means for forming an image of the light reflectively deflected by the deflecting means, on a surface to be scanned,

wherein the scanning optical means comprises a plurality of sagittal asymmetric change surfaces in which curvatures in the sagittal direction change on an asymmetric basis in the meridional direction with respect to the optical axis of the scanning optical means.

*Sagitt* *Surf*

2. The optical scanning apparatus according to Claim 1, wherein said sagittal asymmetric change surfaces comprise two or more sagittal modification surfaces in which magnitude relation differs among curvatures in the sagittal direction at respective positions in the meridional direction with respect to the optical axis.

3. The optical scanning apparatus according to Claim 2, wherein said sagittal deformation surfaces comprise two or more surfaces in which the curvatures in the sagittal direction at the respective positions in the meridional direction with respect to the optical axis become large or small on the same side.

4. The optical scanning apparatus according to Claim 2, wherein in at least one surface of said sagittal deformation surfaces the curvatures in the sagittal direction become large on the side of said light source means with respect to the optical axis.

*Sub  
by*

5. The optical scanning apparatus according to Claim 1, wherein in at least one surface of said sagittal asymmetric change surfaces the curvatures in the sagittal direction have an inflection point only on one side in the meridional direction with respect to the optical axis.

*Cont'd  
All*

6. The optical scanning apparatus according to Claim 1, wherein said scanning optical means comprises a plurality of fθ lenses, an fθ lens located closest to the deflecting means out of said plurality of fθ lenses has a negative, refractive power in the sub-scanning direction, and an fθ lens located closest to the surface to be scanned has a positive, refractive power in the sub-scanning direction.

7. The optical scanning apparatus according to Claim 6, wherein all lens surfaces of said plurality of fθ lenses are formed in a concave shape opposed to said deflecting means.

8. The optical scanning apparatus according to Claim 1, wherein the following condition is satisfied:

$$\Rightarrow \frac{k}{W} \geq 2 \leq 6$$

where k is an fθ coefficient of said scanning optical means and W an effective scanning width on said surface to be scanned.

*Don't*

9. The optical scanning apparatus according to Claim 1, wherein the following condition is satisfied:

$$|\beta_s| \geq 2$$

*Say By*

where  $\beta_s$  is a lateral magnification in the sub-scanning direction of said scanning optical means.

*Don't*

10. (Amended) The optical scanning apparatus according to Claim 1, wherein said light source means includes a plurality of light-emitting regions for emitting a plurality of beams and the plurality of beams are guided from said light source means to said deflecting means by said entrance optical means and images of the beams reflectively deflected by said deflecting means are formed on a surface to be scanned by said scanning optical means.

*Say By*

11. (Amended) The optical scanning apparatus according to Claim 10, wherein said sagittal asymmetric change surfaces comprise two or more sagittal modification surfaces in which magnitude relation differs among curvatures in the sagittal direction at respective positions in the meridional direction with respect to the optical axis.

12. (Amended) The optical scanning apparatus according to Claim 11, wherein said sagittal deformation surfaces comprise two or more surfaces in which the curvatures in the sagittal direction at the respective positions in the meridional direction with respect to the optical axis become large or small on the same side.

13. (Amended) The optical scanning apparatus according to Claim 11,  
wherein in at least one surface of said sagittal deformation surfaces the curvatures in the  
sagittal direction become large on the side of said light source means with respect to the  
optical axis.

*Confidential*

14. (Amended) The optical scanning apparatus according to Claim 10,  
wherein in at least one surface of said sagittal asymmetric change surfaces the curvatures in  
the sagittal direction have an inflection point only on one side in the meridional direction  
with respect to the optical axis.

*Sabotage*

15. (Amended) The optical scanning apparatus according to Claim 10,  
wherein said scanning optical means comprises a plurality of fθ lenses, an fθ lens located  
closest to the deflecting means out of said plurality of fθ lenses has a negative, refractive  
power in the sub-scanning direction, and an fθ lens located closest to the surface to be  
scanned has a positive, refractive power in the sub-scanning direction.

16. (Amended) The optical scanning apparatus according to Claim 15,  
wherein all lens surfaces of said plurality of fθ lenses are formed in a concave shape  
opposed to said deflecting means.

17. (Amended) The optical scanning apparatus according to Claim 10,  
wherein the following condition is satisfied:

$$k/W \leq 0.6$$

*Sob By*

where  $k$  is an  $f\theta$  coefficient of said scanning optical means and  $W$  an effective scanning width on said surface to be scanned.

*Cont A*

18. (Amended) The optical scanning apparatus according to Claim 10, wherein the following condition is satisfied:

$$|\beta_s| \geq 2$$

where  $\beta_s$  is a lateral magnification in the sub-scanning direction of said scanning optical means.

19. An image-forming apparatus comprising the scanning optical apparatus as set forth in either one of Claims 1 to 18, a photosensitive body located at said surface to be scanned, a developing unit for developing an electrostatic, latent image formed on said photosensitive body with the light under scan by said scanning optical apparatus, into a toner image, a transfer unit for transferring said developed toner image onto a transfer medium, and a fixing unit for fixing the transferred toner image on the transfer medium.

20. An image-forming apparatus comprising the scanning optical apparatus as set forth in either one of Claims 1 to 18, and a printer controller for converting code data supplied from an external device, into an image signal and supplying the image signal to said scanning optical apparatus.